

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~A protein~~ An isolated protein selected from the group consisting of

- (A) ~~(i)~~ a protein having an amino acid sequence of SEQ ID NO: 5 ~~represented by amino acid position Nos. 1 to 519 in SEQ ID NO: 2 in the sequence listing,~~
- ~~(B) a protein having an amino acid sequence represented by amino acid position Nos. 1 to 510 in SEQ ID NO: 4 in the sequence listing,~~
- ~~(C) a protein having an amino acid sequence corresponding to amino acid position Nos. 1 to 519 in SEQ ID NO: 2, wherein one or more amino acid(s) are substituted, deleted, inserted, added or inverted in the sequence of SEQ ID:2, and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide, and~~
- ~~(D) (ii)~~ a protein having an amino acid sequence corresponding to ~~amino acid position Nos. 1 to 510 in SEQ ID NO: 4~~ SEQ ID NO: 5, wherein one or more to 170 amino acid(s) are substituted, deleted, or inserted, ~~added or inverted in the sequence of SEQ ID:4,~~ and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide.

2. (Currently Amended) ~~A Nucleic acid molecule~~ An isolated polynucleotide encoding a protein selected from the group consisting of

- (A) ~~(i)~~ a protein having an amino acid sequence of SEQ ID NO: 5 ~~represented by amino acid position Nos. 1 to 519 in SEQ ID NO: 2 in the sequence listing,~~
- ~~(B) a protein having an amino acid sequence represented by amino acid position Nos. 1 to 510 in SEQ ID NO: 4 in the sequence listing,~~

~~(C) a protein having an amino acid sequence corresponding to amino acid position Nos. 1 to 519 in SEQ ID NO: 2, wherein one or more amino acid(s) are substituted, deleted, inserted, added or inverted in the sequence of SEQ ID:2, and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide, and~~

~~(D) (i) a protein having an amino acid sequence corresponding to amino acid position Nos. 1 to 510 in SEQ ID NO: 4~~ SEQ ID NO: 5, wherein one or more to 170 amino acid(s) are substituted, deleted, or inserted, ~~added or inverted in the sequence of SEQ ID:4~~, and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide.

3. (Currently Amended) ~~Nucleic acid molecules~~ The isolated polynucleotide according to claim 2, which is selected from the group consisting of

~~(a) a DNA having a nucleotide sequence of nucleotide position Nos. 72 to 1628 in the nucleotide sequence shown in SEQ ID NO: 2,~~

~~(b) (i) a DNA having a nucleotide sequence of nucleotide position Nos. 73 to 1602 in the nucleotide sequence shown in SEQ ID NO: 4,~~

~~(c) a DNA that hybridizes with DNA as defined in (a) under stringent conditions and encodes a protein having an activity of catalyzing the reaction for releasing an amino acid from N-terminal of a peptide, and~~

~~(d) (ii) a DNA that hybridizes with DNA as defined in (b) (i) under stringent conditions and encodes a protein having an activity of catalyzing the reaction for releasing an amino acid from N-terminal of a peptide, wherein said stringent conditions includes a washing step at 60°C in 1 x SSC and 0.1% SDS.~~

4. (Currently Amended) ~~A nucleic acid molecule~~ The isolated polynucleotide according to claim 3 having the nucleotide sequence of SEQ ID NO: 2 ~~or~~ 4.

5. (Currently Amended) A recombinant ~~nucleic acid molecule~~ polynucleotide containing the ~~nucleic acids~~ polynucleotide according to claim 2.

6. (Currently Amended) ~~A transformed~~ An isolated transformed microorganism host cell containing the ~~nucleic acid molecule~~ polynucleotide according to claim 2 in a form that can be expressed.

7. (Currently Amended) The isolated transformed microorganism host cell according to claim 6, which is a filamentous fungus, yeast or Escherichia bacterium.

8. (Currently Amended) A process for producing an aminopeptidase, which comprises ~~the steps of~~ culturing the isolated transformed microorganism host cell according to claim 7 to express ~~nucleic acid molecules~~ the protein encoded by the polynucleotide introduced into the transformed microorganism host cell and recovering the produced protein.

9. (Currently Amended) An isolated aminopeptidase having the following properties
1) to 8):

1) hydrolyzing a peptide or protein having leucine or methionine at the N-terminal to
release leucine or methionine;

2) having an optimum pH of 7.0 to 7.5;

- 3) having an optimum temperature of 37°C to 45°C;
- 4) having a remaining activity of at least 80 % even at a sodium chloride concentration of 3 M, with the activity thereof in the absence of sodium chloride being defined as 100 %;
- 5) having a remaining activity of at least 80 % after the storage in the presence of 3 M of sodium chloride at 0°C for 24 hours, with the activity thereof after the storage in the absence of sodium chloride at 0°C for 24 hours being defined as 100 %;
- 6) having a remaining activity of at least 60 % after the storage at pH 5.8 to 9.5 at 0°C for 24 hours, with the activity thereof after the storage at pH 7.5 at 0°C for 24 hours being defined as 100 %;
- 7) having a molecular weight of 550 kD ~~on non-denatured polyacrylamide gel as~~ measured on a native PAGE gel and a molecular weight of ~~22, 33~~ 22 or 33 kD ~~on denatured polyacrylamide as measured on a SDS-PAGE gel after reducing and heating said protein;~~ and,
- 8) requiring cobalt ion or zinc ion for being activated.

10. (New) The isolated protein of Claim 1, wherein said protein has an amino acid sequence corresponding to SEQ ID NO: 5, wherein one to 50 amino acid(s) are substituted, deleted, or inserted and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide.

11. (New) The isolated polynucleotide of Claim 2, wherein said polynucleotide encodes a protein having an amino acid sequence corresponding to SEQ ID NO: 5, wherein

one to 50 amino acid(s) are substituted, deleted, or inserted and which protein has an activity of catalyzing the reaction for liberating an amino acid at an N-terminal of a peptide.

SUPPORT FOR THE AMENDMENTS

Claims 1-9 have been amended.

Claims 10-11 have been added.

The amendment of Claims 1-9 is supported by the specification and the corresponding claims as originally filed. Additional support for the amendment of Claims 1 and 2, as well as for new Claims 10 and 11, is provided by the specification at page 6, lines 1-8. Additional support for the amendment of Claim 3 is provided by the specification at page 6, line 27 to page 7, line 8.

The specification has also been amended to delete an embedded hyperlink.

No new matter has been added by the present amendments.